GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

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MIGRATION OF YOUNG SCIENTISTS
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Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the Government is aware that the young scientists migrate to other countries for higher studies/advanced research and do not return;

(b) if so, the steps taken/proposed to be taken by the Government to minimize the outflow of Indian scientists;

(c) whether the Government has made any efforts to pursue the best scientists of Indian origin living in foreign countries to call them back; and

(d) if so, the details thereof and the outcome thereof ?

Answer

MINISTER OF SCIENCE AND TECHNOLOGY AND MINISTER OF EARTH SCIENCES (KAPIL SIBAL)

(a) & (b): Yes, Sir. A large number of young scientists go abroad for higher studies and/or advanced research and a sizable fraction of them do not return. This exodus is mainly because of better educational and research facilities and opportunities abroad. In most developed nations, the private sector contributes significantly towards higher education and research and invests heavily into R&D leading to attractive employment opportunities for scientists. Though such contributions by the private sector have increased in India in recent times, it still has to multiply many times to retain scientific talent in the country. The Government of India, on its part, has taken a number of steps in recent times to strengthen the educational and research infrastructure in science and technology.Three new Indian Institutes of Science Education and Research (IISERs) have been set up at Kolkata, Pune and Chandigarh. These institutes, apart from carrying out frontline and internationally competitive research, would offer integrated M.Sc. programmes in a multi-disciplinary and academically flexible and research-oriented environment. Establishment of three new IITs has also been announced in this year's budget. In order to give a boost to R&D in the country, the Government has launched S&T mission mode programmes, established centres of excellence, launched international collaborative projects, taken steps to strengthen R&D infrastructure in academic institutions and research labs, launched a variety of schemes to support individual research projects of scientists and started a number of fellowships like the Swarnajayanti Fellowships for outstanding young scientists, Ramanna Fellowships for performing scientists, Shyama Prasad Mookerjee Fellowships, JC Bose Fellowships, KS Krishnan Fellowships, etc. to attract and reward scientists, especially the young ones, for their scientific contributions.

The Government, in the XI Plan has included a new scheme called INSPIRE

(Innovation in Science Pursuit for Inspired Research).The main features of the proposed scheme will be: (1) innovation funding in schools (one million young innovators);

(2) summer camp with science ions (for high performers);

(3) assured opportunity schemes for proven talent force; and,

(4) retention of talent in public funded research through public-private partnerships. In addition, another new scheme on Scholarships for Science in Higher Education will be initiated in the XI Plan.The scheme targets institution of 10,000 fellowships of Rs. 1,00,000/- per year for bright students in science streams during their B.Sc/M.Sc courses.

(c) & (d): Yes, Sir. The Government has recently launched some innovative schemes to either motivate scientists of Indian origin living abroad to come back to India or to leverage their scientific expertise for the growth of scientific R&D in the country. For example, the Ramanujan Fellowships of Department of Science and Technology

(DST) have been instituted to attract outstanding scientists and engineers from all over the world to take up scientific research positions in India; and, the Collaborative Projects with Scientists & Technologists of Indian Origin Abroad Programme

(CP-STIO Programme) of DST enables scientists and technologists of Indian origin living abroad to visit India for a brief period and carry out research activities jointly with Indian scientists. So far, 9 Ramanujan Fellowships have been awarded and 27 projects have been awarded under the CP-STIO Programme. K.S Krishna Research Associateship of Department of Atomic Energy (DAE) provides career opportunities in the Units of DAE for scientists from India or abroad. Defence Research and Development

Organization (DRDO) through its Talent Search Scheme for Non- Resident Indians (NRIs) appoints qualified and suitable NRIs as Scientist in various grades in DRDO depending on their experience. Nineteen such NRIs have been recommended for appointment during the last two years.The Department of Biotechnology has also instituted the Ramalingaswamy Fellowship for scientists of Indian origin settled in any part of the world who would like to come back and carry out their research in India.